

### "APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000413410013-4

Raboty Po Kvantovoy Yeorii Polya (Work in the Quantum Field Theory) Leningrad,
Izd-Vo Leningradskogo Universiteta, 1957.
157, (1) P.
At Head of Title: Leningrad, Universitet.
"Literatura": P. (158)

613.503 N/5

### "APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000413410013-4

FOCK, V.A.

CZECHOSLOVAKIA/Theoretical Physics - Theory of Relativity. Unified B-2

1959年2月1日 - 1950年 - 1

Field Theory.

Abs Jour : Ref Zhur - Fizika, No 2, 1958, No 2645

Author : Fock. V.A. Inst : Not Given

Title : Homogeneity, Covariance, and Relativity

Orig Pub : Chekhosl. fiz. zh., 1957, 7, No 3, 255-261

Abstract : No abstract

Card : 1/1

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CZECHOSLOVAKIA/Theoretical Physics - Tuentum Mechanics

B\_4

Abs Jour : Ref Zhur - Fizika, No 9, 1958, No 19637

Fock V.A. Author

Inst

: On the Interpretation of Cuentum Mochanics. Title

Orig Pub: Chokhosl. fiz. zh., 1957, 7, No 6, 643-656

Abstract : Soo Abstract 19636

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> uage on his paper (published in 1990) - the offerty of wie Of greatest interest for the author, were, however, the 6 or 7 talks with Nils Bor (Niels Bohr).

ASSOCIATION PRESENTED BY Not given

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Card 1/1

### "APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000413410013-4

FOK, V. A.

"Three Lectures on Relativity Theory," Reviews of Modern Physics, 29, 325, 1957.

Summarizes three lectures which Fok gave in Copenhagen.

Evaluation - A-3,106,478, 9 June 1958.

and A-3,104,807,19 May 1958

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Fok, V. A.

53-4-6/10

AUTHOR:

On the Interpretation of Quantum Mechanics (Ob interpretatsii kvantovoy mekhaniki)\*

PERIODICAL:

Uspekhi Fiz.Nauk, 1957, Vol. 62, Nr 4, pp. 461-474 (USSR)

ABSTRACT:

The present paper is arranged as follows: 1: The experiments of interpreting the wave functions classically and the causes of their failure. 2: The idea by Niels Bohr and his terminology: According to the author's opinion, Niels Bohr stresses the part played by the apparatus too much and underestimates the necessity of abstraction. Niels Bohr, in a manner of speaking, forgets that the properties of the micro object and not the properties of the apparatus have to be investigated. Next, the author deals with the supposed deficiences of Bohr's terminology. According to the statements made by the author, Bohr does not support the positivistic point of view and wants to neglect the term "uncontrollable interaction". Furthermore, according to Bohr, the general causality principle has to be distinguished from the determinism of the Laplace type, because only Laplace's determinism contradicts the law of atomic physics. 3: The rejection of new ideas as a reaction to their positivistic interpretation. The most extreme positivistic point of view is held by P. Jordan, serious physicians, according to the opinion of the author,

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On the Interpretation of Quantum Mechanics.

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like M.Born, W.Heisenberg, disregard this point of view more and more. The author then deals with the too narrow deterministic point of view of the deterministical point of view. 4: Relativity with respect to means of observation: Such a relativity, according to the opinion of the author, by no means destroys objectivity. The objects of the micro world are just as real and their properties just as objective as those studied by classical physics. 5: The conception of the apparatus. 6: The nature of the dualism wave -particle. According to the opinion of the author an atomic object has the same potential possibilities to occur, according to exterior conditions, either as a wave or as a particle or also as an intermediate form. 7: The probability description of the interaction between object and device. 8: The probability characteristic of the state of an object. 9: The conceptions of the potential possibilities and those realizable in classical physics. 10: The probability and the statistics in quantum mechanics. 11: The forms of the expression for the causality principle in quantum mechanics. 12. The philosophical problems raised by quantum mechanics. There is 1 figure.

AVAILABLE:

Library of Congress

\*This article is being published in English in the Czsl. Journal of Physics (Ceskoslovensky Casopis Pro Fysiku) / issue not given

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SOV/109-3-12-1/13

AUTHORS: Fok, V.A., Vaynshteyn, L.A. and Belkina, M.G.

TITIE: Duct Propagation of Radio Waves in the Lowest Layer of Troposphere (Rasprostraneniye radiovoln po

prizemnomu troposfernomu volnovodu)

PERIODICAL: Radiotekhnika i Elektronika, 1958, Vol 3, Nr 12,

pp 1411 - 1429 (USSR)

ABSTRACT: The work is devoted to the theory of propagation of

radio waves in the tropospheric waveguide (inversion layer), which is elaborated on the assumption that the points of transmission and reception are both inside the waveguide. This type of propagation can be referred to as the inside-layer propagation. The basic formulae of the work are taken from a number of the authors' previous works (Refs 1-3). It is assumed that the

attenuation coefficient for the case when the refraction

index of the atmosphere is an arbitrary function of

height can be expressed by:

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Duct Propagation of Radio Waves in the Lowest Layer of Troposphere

$$V(x, y, y', q) = \sqrt{\frac{x}{\pi}} e^{-i\frac{\pi}{4}} \begin{cases} e^{ixt}F(t, y, y', q)dt \end{cases} (1)$$

where the contour C extends over all the poles of the integrated function in the positive direction. If the parameter q = 00, which corresponds to an arbitrary polarisation at cm and short waves and to horizontal polarisation at longer waves, the integrated function F can be written as shown in Eq (2), where y and y' are normalised heights of the point of transmission and the point of reception, as defined by Eqs (3). The parameter x is the normalised distance between the two points, as expressed by Eq (4), where the parameter m is given by Eq (5) in which a is the radius of the Earth. The functions f<sub>1</sub> and f<sub>2</sub> are the independent solutions of the differential equation which is expressed by Formula (6). The function p(y) in Formula (6) depends on the

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Duct Propagation of Radio Waves in the Lowest Layer of Troposphere

where n is the refractive index for the air. The subintegral function F, for the case of the inside-waveguide
propagation, can be expressed by Eq (20), where \( \) is
defined by Eq (21). Various auxiliary functions in
Eqs (20) and (21) are defined by Eqs (12) - (19). The
attenuation coefficient V can be represented as a
series:

 $V(x, y, y') = 2 \sqrt{\pi x} e^{-\frac{1}{4} \frac{4}{\lambda}} \sum_{m=1}^{\infty} R_{m} e^{ixt_{m}}$  (22),

where  $R_m$  is the residue of the function F at the m-th pole  $t_m$ . The expression for  $R_m$  is therefore in the form of Eq (24). Most of the numerical results presented in this work are based on the use of Eqs (22), (23) and (24). The accuracy of these equations is borne out by the fact that the attenuation coefficient evaluated by using them is only slightly different from that determined by using accurate formulae; the results are indicated in Figures 1. The heavy curves of Figures 1 were found from the accurate

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Duct Propagation of Radio Waves in the Lowest Layer of the Troposphere

formulae (Eqs (25) and (26)) while the fine curves correspond to the results obtained from Eqs (23) and (24). The functions f1 and f2 of Eq (2), which are referred to as the height factors, can be evaluated by using the Airy functions. Thus, it is shown that f<sub>1</sub> and f<sub>2</sub> are in the form of Eqs (31), where  $V_1$  and  $V_2$  are given by is found from Eqs (33), for which y Eqs (32): is the smaller root of Eq (34); v and u in Eqs (32) are the Airy functions. From Eqs (31), it follows that can be expressed by Eq (36). If R1 is evaluated approximately by employing Eq (24) and more accurately by employing Eq (36), it is found that Eq (24) gives erroneous results. This is shown in Table 2, where R, is evaluated for two values of Y and two values of y<sub>i</sub>. In this case, it is therefore necessary to employ Eqs (31), (32) and (33). The attenuation coefficient V is dependent on x, y and y and on the function p(y) which is dependent on the Card4/7

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Duct Propagation of Radio Waves in the Lowest Layer of Troposphere

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parameters y<sub>i</sub> and y<sub>l</sub>. The function p(y) is characterised by three parameters which are expressed by Eqs (38), (39) and (40). These parameters are shown in Tables 3a and 3b for two groups of propagation conditions (see p 1418). The curves of p(y) - p(y<sub>i</sub>) for all the cases of Tables 3 are shown in Figures 2. The attenuation functions for these cases are shown in Figures 3 and 4. The curves of Figures 2, 3 and 4 can be used to investigate the conditions of actual propagation routes. The conditions represented by the first row of Table 3a and the first row of Table 3b were chosen for special investigation. The results are shown in Figures 10, 11 and 12; Curves 1 in these figures correspond to the wavelength of 3.33 cm, Curves 2 are for the wavelength of 10 cm, Curves 3 are for 30 cm, Curves 4 of Figure 10 are for the 90 cm wavelength. In an earlier work (Ref 3), it was shown that Eq (23) can be written as Eq (45), where m is the number of a given root and 81 is in the form of the integral given by

Eq (46). Eq (45) can also be written in the form of Eq (52) where G is expressed by Eq (53) and  $z_1$  is the root of

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Duct Propagation of Radio Waves in the Lowest Layer of Troposphere

Eq (54). From Eq (52) and Eq (55), it follows that the critical wavelength for the tropospheric waveguide is in the form of Eq (58). The term "critical wavelength" does not imply a discontinuity in the attenuation coefficient of the system; it is therefore a purely arbitrary term. It is of interest to find what factors, apart from M(0) and M(h,), determine the magnitude of the critical wave-It is found that M"(h;) is also one of the length. principal parameters which determines the value of the attenuation coefficient. This is borne out by the fact that the factor  $\mathcal{K}_{m}$ , which is defined by Eq (67), can be expressed in the form of Eq (70). By employing parameters h, M(O)-M(h,) and M''(h,), it is found that the attenuation coefficients for simple waves are approximately equal for widely differing types of propagating conditions, i.e. M-profiles. This means that it is necessary to take into account also some additional parameters but this problem has not yet been solved. One of the most important results of

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SOV/109-3-12-1/13 Duct Propagation of Radio Waves in the Lowest Layer of Troposphere

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the analysis is the fact that long-distance tropospheric propagation of the waveguide type is only slightly dependent on the wavelength. Thus, even if the propagated wavelength is longer by an order than the critical wave, a long-distance propagation is still possible. The caiculations for this work were carried out by the mathematical group, consisting of O.A. Merkulova, V.M. Khapayeva, A.M. Soboleva, L.Ye. Molodtsova, Z.G. Repina and A.G. Mayorova. There are 17 figures, 4 tables and 7 references, 3 of which are English and 4 Soviet.

SUBMITTED: June 1, 1957

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#### "APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000413410013-4

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CZECHOSLOVAKIA/Theoretical Physics - Quentum Mechanics

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Abs Jour : Ref Zhur - Fizika, No 9, 1958, No 19636

Fock, V.A. Author

: Not Given Inst

: On the Interpretation of Quantum Mechanics Title

Orig Pub: Coskosl. cosop. fys., 1958, 8, No 1, 3-14; Sm. RZhFiz, 1958

Abstract : Soo Referat Zhur Fizika, 1958, No 5, 9911.

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### "APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R000413410013-4

FOK, V.A.; FEDOROV, A.A. Diffraction of a plane electromagnetic wave on an ideally conducting paraboloid of revolution. Zhur. tekh. fiz. 28 no.11:
2548-2566 N \*58. (MIR! (MIRA 12:1)

CIA-RDP86-00513R000413410013-4" APPROVED FOR RELEASE: 08/23/2000

KURCHATOV, I.V., akademik; SEMENOV, N.N., akademik; TOPCHIYEV, A.V., akademik; ALEKSANDROV, A.P., akademik; TOFFE, A.F., akademik; FOK, V.A. akademik; VUL, B.M.

Outstanding scientific discovery; on the awarding of the Nobel prize in physics to the Soviet scientists P.A. Cherenkov, I.E. Tamm, I. M. Frank. Vest.AN SSSR 28 no.12:7-9 D 58.

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24(5) AJTHOR:

Fok, V. A.

SOV/54-59-3-12/21

TITLE:

On the Canonical Transformation in Classical and Quantum Me-

chanics

PERIODICAL:

Vestnik Leningradskogo universiteta. Seriya fiziki i khimii,

1959, Nr 3, pp 67 - 70 (USSR)

ABSTRACT:

The present paper investigates more closely the similarity of the unitary operational transformation to the tangential transformation of classical mechanics. The transformation

functions for both cases have the following form:

 $S = S(q_1, \dots, q_n; q_1, \dots, q_n)$  and their tangential func-

tion is determined by the differentials:

 $\sum_{r=1}^{n} p_r dq_r - \sum_{r=1}^{n} P_r dQ_r = dS; p_r = \frac{\partial S}{\partial q_r} \text{ and } P_r = \frac{\partial S}{\partial Q_r}$  (3) follows

herefrom. This solution is possible in all cases as its determinant is unequal to 0. In quantum mechanics a tangential transformation means a unitary transformation of the representation, where q denote the diagonal to the representations in which Q are the diagonals. The matrix of the transformation operator

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On the Canonical Transformation in Classical and Quantum Mechanics

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has the following form:

$$(Q \mid F^{*} \mid Q) = \int \overline{\Psi}_{Q} \cdot (q) F \Psi_{Q}(q) dq$$
. The eigenfunction  $\Psi_{Q}(q)$  may be

expressed by a special unitary operator so that  $F^*=UFU^{-1}$ . For the orthogonal transformation and in semiclassical approximation and the relationship

$$S-S' = \sum_{r=1}^{n} (Q'_r - Q_r) \frac{\partial S}{\partial Q_r} = S-S' = (Q-Q')P \text{ the following is obtained}$$

with

$$\int_{\overline{\Psi}_{Q}}^{\overline{\Psi}_{Q}}(q)\Psi_{Q}(q)dq=c^{2}\int_{e^{\frac{1}{2}}}^{\frac{1}{2}}\left(Q-Q^{-1}\right)P\left|\frac{\partial S^{2}}{\partial Q\partial q}\right|dq. \text{ The Jakobi-transforma-}$$

tion is obtained with  $P_r$  according to (3), and by the introduction of the  $\delta$ -function the following simplified form:  $\int \overline{\Psi}_{G_1}(q)\Psi(q)dq=\delta_G(Q-Q^*).$  The operator F expressed in  $q_r$  and  $p_r$ 

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On the Canonical Transformation in Classical and Quantum Mechanics

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 $p_r = -ih \frac{\partial}{\partial q_n}$ . By the effect of the operator upon the function  $\exp(\frac{i}{h}S)$  an approximation of this function is attained and consequently the expression  $F(q,p) = F(q(q,p),p(q,p)) = F^*(q,p)$  is obtained, and thus, for

obtained, and thus, for  $(Q \cdot | F^*|_Q) = c^2 \int F^*(Q,P) e^{i/h(Q \cdot -Q)P} dP.$  The operator  $-ih \frac{\partial}{\partial Q \cdot}$  applicable to P is reintroduced for the computation of the integral, and the operator F is set up from the integral, and for the rest  $\delta$ -function is re-introduced; thus, the following simplified expression is obtained:

 $(Q \cdot | F \cdot | Q) = F \cdot (Q, -ih \frac{\partial}{\partial Q} \cdot ) \delta_{Q}(Q - Q \cdot )$ . Therefore, it is possible that  $F(Q, p) = F \cdot (Q, P)$  which contains the S-function in the expressions  $p = \frac{\partial S}{\partial Q}$  and  $P = -\frac{\partial S}{\partial Q}$ .

SUBMITTED: Card 3/3

April 15, 1959

AUTHOR: Fok, V.A. SOV/109-4-4-23/24

TITLE: Concerning the Letter to the Editor by R.G. Mirimanov

(Po povodu pis'ma v redaktsiyu R.G. Mirimanova)

(Letter to the Editor)

PERIODICAL: Radiotekhnika i elektronika, 1959, Vol 4, Nr 4,

p 730 (USSR)

ABSTRACT: A letter by R.G. Mirimanov appeared in this journal in 1958 (Nr 7, p 971). In connection with the letter, the

author finds it necessary to communicate the following. Some time ago, he received a letter from Professor J.B. Keller, New York University, Institute of Mathematical Sciences, in which it was pointed out that R.G. Mirimanov committed a plagiarism with respect to a number of the works of Keller and his associates (Ref 3). The author investigated the complaint and found that, in fact, the formulae from the Mirimanov paper (Ref 2) coincide almost exactly with those of Keller and his associates, except that the unknown function is denoted with a symbol φ

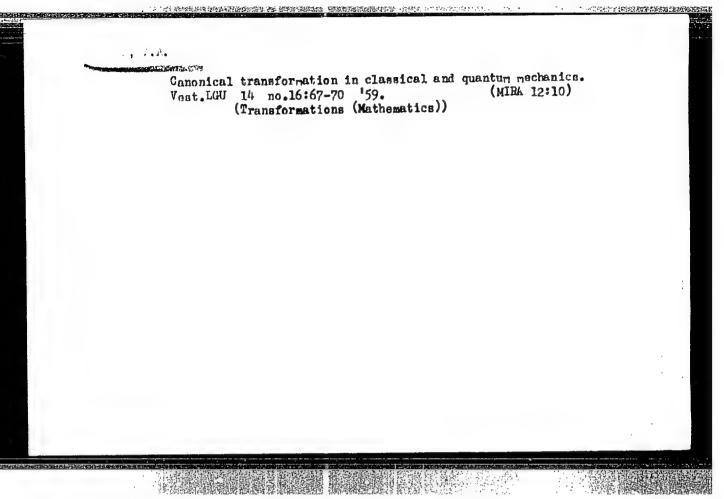
instead of p. As regards the other works of R.G.Mirimanov Cardl/2 (which he mentioned in his letter to the editor) these are

SOV/109-4-4-23/24 Concerning the Letter to the Editor by R.G. Mirimanov (Letter to the Editor)

regarded as a collection of formulae, the major portion of which are copied from Keller and his co-authors without understanding their meaning. The letter from Professor Keller was sent to the author (and not to Mirimanov) in view of the fact that the author sponsored the first paper by Mirimanov (Ref 1). There are 3 references, 2 of which are Soviet and 1 English.

SUBMITTED: October 3, 1958

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### "APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000413410013-4

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**AUTHORS:** 

Employe, P. L., Fok, V. A., Vayanhteya, L. A.

TITLE:

space Boundary Problems for a Mellow Cylinder of Finite Length

PERIODICAL:

Mournal Ockhaicheskoy Fiziki, 1959, Vol 29, Nr 10, pp 1177-

1137 (USSR)

ABSTRACT:

The paper considers the electrostatic potential of an ordinary layer of charges distributed at a certain surface density over a holiew cylinder of finite length. Such a cylinder may be a piece of a round tubing. The purpose of the study is to develop a general method of solution of integral equations for electrostatic problems giving the relationship between the surface density and its potential in conducting cylinders of finite length. Such problems frequently occur in mathematical physics, there being no general method for their solution. When the length of hollow cylinders is sufficiently big the problem is practically equivalent to a case of solid cylindrical conductors. The paper is of a highly mathematical nature. A hollow cylinder is represented in cylindrical coordinates, and a Laplacian equation for the potential

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Static Boundary Problems for a Hollow Cylinder of Finite Length

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Vs of an ordinary layer of surface charge of density S is written. It is stated that this equation may be reduced to an infinite number of linear equations, if the known function Vs (z) may be resolved within -L < z < L (L being one half of the length of the cylinder) range into a series of any system of functions. The equation may also be applied to sufficiently short cylinders (narrow rings) when L/a < 1, where a represents the radius of the cylinder. Each of the infinite number of linear equations is the summation of  $\boldsymbol{A}_{\boldsymbol{n}\boldsymbol{q}}$  Uq products, where  $\theta_q$  are unknown coefficients and  $A_{M,V}$  represents the system coefficients. For very long cylinders the system coefficients A. Two methods are discussed for the and a large of  $F_{HY}$  coefficients. The first method appries to conditionly short cylinders where 0<L/a=1. Here the A . . . . . . represented as a summation of a convergent made a commo functions, and at values L/a 1 an explicit parameter of these coefficients may be had by using the Iterative method, The second method discusses cases where L/a 1. Pair a Marin's crassformation [Ref 4], Bessel and Gamma functions [Bod ale at Meyer functions [Ref 2], A to is represent 4 to

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Static Boundary Problems for a Hollow Cylinder of Finite Length

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SOV/57-29-10-1/19

matrix form the solution of which results in a fourth-order linear differential equation which can be applied to cases where L/a>1 as well as to those where L/a<1. The shape of this fourth-order equation is suitable for the solution on high-speed computing machines of electrostatic problems of the type discussed. There are 6 references, 1 Soviet, 3 U.S., 1 Swedish, 1 non-Soviet.

ASJOCIATION:

Institute for Physical Problems, Academy of Sciences, USSR, Moscow

(Institut fizicheskikh problem, AN SSSR)

SUBMITTED:

March 4, 1959

Card 3/3

### "APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000413410013-4

9.1000,24.3000

75325

SOV/57-29-10-2/18

CIA-RDP86-00513R000413410013-4"

**AUTHORS:** 

Kapitsa, P. L., Fok, V. A., Vaynshteyn, L. A.

TITLE:

Symmetrical Electrical Oscillations of an Ideally Conducting Hollow

Cylinder of Finite Length

PERIODICAL:

Zhurnal tekhnicheskoy fiziki, 1959, Vol 29, Nr 10, pp 1188-1205

(USSR)

APPROVED FOR RELEASE: 08/23/2000

ABSTRACT:

The subject matter of the paper is the problem of electromagnetic oscillations of an ideally conducting cylinder. It is a problem with which radio engineering is concerned when antenna vibrators are designed. This study, however, is limited to the case when current density on the surface of the cylinder is uniform and has a longitudinal component only, but it applies to very thin as well as to larger-size solid conductors. Oscillations that take place in such cases are called symmetrical electrical oscillations. The study is of a highly mathematical nature. Basically, it operates with two functions: potential V, which is known, and current density U, which is unknown. The reasoning starts with an integral equation of the potential written within boundary conditions of the

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Symmetrical Electrical Oscillations of an Ideally Conducting Hollow Cylinder of Finite Length

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surface of the cylinder so as to satisfy the Sommerfeld radiation principle. After the application of Bessel, Macdonald, and Hankel functions to the solution of this equation, and using the Neumann multiplier and Legendre polynomial, a relationship in the form of an integral equation is obtained between the V and the U functions. This latter equation is then transformed into an infinite system of linear equations relating V and U. In order to accomplish this an approximate expression is developed for the potential function V resolved in a Fourier series. The approximate expression is good for conditions when a/L  $\ll$ 1 and ka<sup>2</sup>/2L  $\ll$ 1, where L is one half of the cylinder length, a is its radius, and  $k = 2 \pi / \lambda$ ;  $\lambda$ being the wavelength. The current density function U may also be resolved in a Fourier series for any even or odd function. It is stated that when the function V is neither even nor odd it may always be represented as a sum of the even and odd functions, for each of which a corresponding U function, even and odd, must be found. The sum of the latter will give the sought-for current on the surface of the cylinder. The coefficients of the members of these equations, resolved in series, form infinite matrices. These are resolved into the sum of the diagonal matrix and the general

Card 2/4

2007年12年成成成年的政治,经济部分的发展的基础。于经济的运动的成果。

Symmetrical Electrical Oscillations of an Ideally Conducting Hollow Cylinder of Finite Length

75325 SOV/57-29-10-2/18

one; expressions are then given for their computation, and it is shown that a solution may be obtained without the necessity of calculating the determinants but by the application of the iterative method. Prior to using this method, however, the undetermined constants of the equations must first be found, for the calculation of which formulas are developed. The developed theory is compared with the theory of thin antenna vibrators. A distinction is made between short vibrators, with k < g, and long vibrators, with  $k \gg g$  (here,  $g = \pi/2L$ ; the other symbols have already been defined). The fact that electrostatic charges accumulate at the ends of the vibrators causes the error in short vibrators to be greater than in the long ones. In either case current distribution along the axis of the vibrator is similar to that in an open-circuit homogeneous transmission line. Conditions are given for the system of equations to have full regularity, in which case they represent cylinders that are very thin, with a -)0, and to the solution of which the iterative method may be applied [Ref 3]. The method discussed in the paper may also be . applied to the solution of electrostatic problems. The difference between this method and the one proposed in Ref 2 is that in the

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Symmetrical Electrical Oscillations of an Ideally Conducting Hollow Cylinder of Finite Length

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latter the density of the electric charge on the surface of a hollow cylinder was represented by a series each member of which showed absence of a requirement for a charge at the ends of the cylinder, while in the presently proposed method the poor convergence of the series signifies that charges are being concentrated at the cylinder ends. The ends of the cylinder have effect only in case of short cylinders (L/a < 1). When long cylinders are being considered (L/a > 1), the proposed method may well be used. For large values of kL this method is cumbersome. In such a case, if the antenna vibrator is thin (ka < 1), the method given in Ref 6 is the more preferable. The method discussed in this paper is suitable for the solution on high-speed computing machines of the type of problems discussed. There are 6 references, 4 Soviet, 1 U.S., 1 Swedish.

ASSOCIATION:

Institute for Physical Problems, Academy of Sciences, USSR, Moscow

(Institut fizicheskikh problem, AN SSSR)

SUBMITTED:

March 4, 1959

Card 4/4

## "APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000413410013-4

.. 1/53-66-4-3 10 Fok. V. L. .UTHOR: Remarks on the Article by Bohr on His Discussions With TITLE Cinstein (Zemechaniya i atat'yo Bora o yeyo diskuusiyakh s Lynshteynom) Uspekhi fizicheskith amur. 1997. Jol 66, ar 4, pp 599-602 1 112 123 11 1 (dist) Pok, one of the two translators of sour's article published in 1.837A JW: this issue (p 5/1) maker some estanks on the problems discaused by Sohr with aposis) consideration of those concerning quantum mechanics. These remarks are apinly the results of discussions between the author and boar on the occasion of his stay (Fok's) in Copenhagen (February Narch 1957). There are 4 references. 3 of which are Coviet. Card 1/1

AUTHORS: Fok, V. Academician, Kuni, F. M. SOV/20-127-6-14/51

TITLE: On the Introduction of a "Quenching" Function in the Dispersion

Relations

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 127, Nr 6, pp 1195-1198

(USSR)

ABSTRACT: The object of the present paper is the proof of the analytical

continuation of the scattering amplitude into the upper half plane, into the so-called "physical" range of energy. The idea of the proof consists in the introduction of a weight function into the Cauchy formula. In the first part, a limited range in the complex plane is used as a basis, and the proof of the analytical continuation is given by means of two theorems. By means of the results obtained, the dispersion relations are investigated, and the function describing the energy of the dispersing particles is conformally transformed into a semicircle  $|z| \leq 1$ , and it is ascertained that the problem of the analytical continuation is identical in both planes. The transformed function is then introduced into equations (1a) and (3), and the equations (5) and (6) are obtained. Equation (5) expresses the value of the scattering

amplitudes in the upper half plane of energy by its value

Card 1/2

SOV/20-127-6-14/51 On the Introduction of a "Quenching" Function in the Dispersion Relations

in the "physical" range of energy, and equation (6) is the condition of the analytical continuation. Finally, the dispersion of protons on protons is dealt with as an example. There are 3 figures and 6 references, 2 of which are Soviet.

SUBMITTED: May 29, 1959

Card 2/2

Note on the N. Bohr's article "Discussion with Einstein on episterological problems in atomic physics." Pokroky mat fyz astr 5 no. 1:11-113. '60	IJ
;	

FOK, V.A.

Comparison of different coordinate conditions in Einstein's theory of gravitation. Zhur. eksp. i teor. fiz. 38 no.1:108-115 Jan '60. (MIRA 14:9)

1. Leningradskiy gosudarstvennyy universitet. (Gravitation)

83584

S/056/60/038/005/017/050 B006/B070

24.4400 AUTHOR:

Fok, V. A.

TITLE:

Einsteinian Statics in Conformal Space

PERIODICAL:

Zhurnal eksperimental noy i teoreticheskoy fiziki, 1960,

Vol. 38, No. 5, pp. 1476-1485

TEXT: In his work on the theory of gravitation, Levi-Civita has not considered the fact that in the static case the space and time coordinated may be completely separated from each other in many different ways. In the present work, the author shows that the most natural method of separating space and time coordinates is that in which the metric of the space is conformally related with the metric usually employed. A space with such a metric is designated by the author as conformal space. Such a space is approximately Euclidean; in any case, it may be considered Euclidean with greater accuracy than in the usual metric. Here, the coordinates which are harmonic in the four-dimensional sense are harmonic also in the three-dimensional sense. The known solutions of Einstein's equations for spherical and axial symmetry are particularly easy to derive if one starts

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Einsteinian Statics in Conformal Space

S/056/60/038/005/017/050 B006/B070

from the gravitational equations in the conformal space. Some further advantages of this metric are emphasized. The Levi-Civita transformation and the transition to the conformal space are then treated in different sections of the paper. While Levi-Civita sets the form  $ds^2 = c^2 V^2 dt^2 - a_k dx_i dx_k$ , Fok gives the relation  $ds^2 = c^2 V^2 dt^2 - (1/V^2) h_{ik} dx_i dx_k$  or  $ds^2 = c^2 V^2 dt^2 - (1/V^2) ds^2$ . Then,  $\sqrt{-g} = (c/V^2) \sqrt{h}$  (h is the determinant of  $h_{ik}$ ),  $dl^2 = (1/V^2) ds^2$ . Then,  $\sqrt{-g} = (c/V^2) \sqrt{h}$  (h is the determinant of  $h_{ik}$ ),  $dl^2 = (1/V^2) ds^2$ ,  $a_{ik} = (1/V^2) h_{ik}$ , and  $a^{ik} = V^2 h^{ik}$ . The four-dimensional invariant  $(R) = 2V\Delta V - 4V_y V^3 - V^2 R$ , and the components of the Einsteinian tensor  $c_{\mu\nu} = (R_{\mu\nu})_g - \frac{1}{2} c_{\mu\nu} (R)_g$  are given by  $c_{ik} = H_{ik} + 2(V_i V_k)/V^2 - h_{ik} (V_j V^3/V^2)$ ,  $c_{oo} = c^2 V^2 \left\{ -V^2 H - 2V V + 3V_j V^3 \right\}$ . Here,  $H_{ik}$  is a three-dimensional conservative tensor of the conformal space, and H is its invariant  $c_{ik} = R_{ik} - \frac{1}{2} h_{ik} R$ ;  $H = -\frac{1}{2} R$ .  $R_{ik} = H_{ik} - h_{ik} H$ . In the following section, the Einsteinian equations are treated in conformal space. It is shown that the equations of Einsteinian statics in conformal space are simple in form

Card 2/3

SUBMITTED:

December 21, 1959

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000413410013-4"

Card 3/3

FOK, Vladimir Aleksandrovich; NOVOZHILOV, Yu.V., red.; LUK'YANOV, A.A., tekim. red.

[Theory of space, time, and gravitation] Teorita prostranstva, vremeni i tiagotenita. Izd.2., dop. Moskva, Gos.izd-vo fizikomatem.lit-ry, 1961. 563 p. (MIRA 15:1)

(Relativity (Physics))

s/035/62/000/009/032/060 A001/A101

AUTHOR:

TITLE:

On the role of principles of relativity and equivalence in Einstein's

theory of gravitation

PERIODICAL:

Referativnyy zhurnal, Astronomiya i Geodeziya, no. 9, 1962, 75,

abstract 9A525 ("Vopr. fflosofii", 1961, no. 12, 45 - 52, 184,

English summary)

The author analyzes principles laid by Einstein in the base of the theory of gravitation. He arrives at the conclusion that the so-called "principle of equivalence" and "general relativity principle" do not actually constitute the basis of Einstein's theory; they served as "construction scaffolding" in the period of creating the theory. These principles were needed by the creator of the theory of gravitation to overcome difficulties connected with necessity of expressing completely new ideas by means of old concepts. In the author's opinion, the following principles were actually laid into the basis of the gravitation theory: 1) Amalgamation of space and time into a single four-dimensional manifold with indefinite metric; 2) the assumption that physical processes affect the metric and

Card 1/2

Card 2/2

FOK, V. A.

"On the transverse diffusion of short waves diffracted by a convex cylinder"

Paper to be presented on RADIO (SCIENTIFIC) UNION, INTERNATIONAL (URSI) - Symposium on Electromagnetic theory and Antennas - Copenhagen, Denmark, 25-30 Jun 62

1. Institute of Physics imeni P. n. Lebedev, Academy of Sciences USSR

FOK, V.A. [Fock, V.A.]

Kinematic and gravitational effects on the reading of a clock in free motion. Bul Ac Pol mat 10 no.81447-450 '62.

1. Leningradskiy gosudarstvennyy universitet. Presented by L. Infeld.

\$/056/62/042/004/035/037 B102/B108

AUTHOR:

Fok, V. A.

TITLE:

The uncertainty principle of energy and time and an attempt

to disprove it

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 42,

no. 4, 1962, 1135 - 1139

TEXT: The author discusses two possible forms and their interpretations of the energy and time uncertainty principle: the Heisenberg principle  $(\Delta(E'-E)\Delta t>h)$ , and another variety which comprises two forms. One is a consequence of the Fok-Krylov theorem (ZhETF, 17, 93, 1947; J. of Phys. USSR, 11, 112, 1947), the other was established by Mandel shtam and Tamm (Izv. AN SSSR, seriya fizich., 9, 122, 1945; J. of Phys. USSR, 9, 249, 1945). These two forms are represented by  $\Gamma T_{1/2} = (h/2) \ln 2$  and

AHAT >h/2; I is the level width entering the dispersion relation, T1/2 is the half-life. The latter relation is not equivalent to the Heisenberg relation. The attempt made by Aharonov and Bohm (Phys. Rev. 122, Card 1/2

S/056/62/042/004/035/037 B102/B108

The uncertainty principle ...

1649, 1961) to disprove the Heisenberg principle is criticized. They have tried to interprete the uncertainty principle according to Fok and krylov and introduced into the Hamiltonian an interaction term involving

Krylov and introduced lines the Hamiltonian (t):  $H = (1/2m)p_x^2 + (1/2m)p_y^2 + yp_xg(t)$ .

This representation implies that instantaneous energy changes of a predictable amount could be observed at a given instant, which hypothesis would be a violation of the uncertainty principle. Aharonov and Bohm have based their criticism of the Heisenberg principle on a logical error (petitio principii). A correct treatment of the problem leads to the Heisenberg principle.

ASSOCIATION: Leningradskiy gosudarstvennyy universitet (Leningrad State

University)

SUBMITTED: December 9, 1961

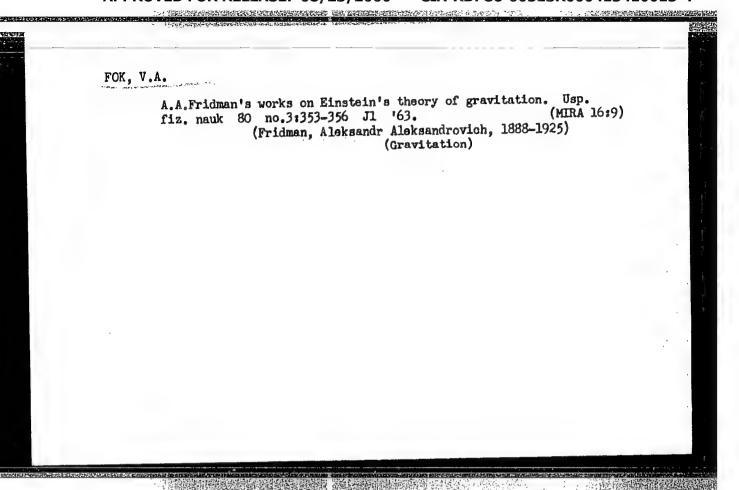
Card 2/2

AMBARTSUMYAN, V.A., akademik; ASRATYAN, E.A.; BOGOLYUBOV, N.N., akademik; VINOCRADOV, A.P., akademik; GINETSINSKIY, A.G.; KNUNY ANTS, I.L., akademik; KOCHETKOV, N.K.; KURSANOV, A.L., akademik; MEL'NIKOV, O.A.; NESMEYANOV, A.N., akademik; NESMEY ANOV, An.N., doktor khim. nauk; OBREIMOV, I.V., akademik; POLIVANOV, M.K., kand.fiz.-mat.nauk; REUTOV, O.A.; RYZHKOV, V.L.; SPITSIN, V.I., akademik; TAMM, I.Ye., akademik; FESENKOV, V.G., akademik; FOK, V.A., akademik; SHCHERBAKOV, D.I., akademik; FRANK, I.M.; FRANK, G.M.; KHOKHLOV, A.S., doktor khim. nauk; SHEMYAKIN, M.M., akademik; ENGEL GARDT, V.A., akademik; SHAPOSHNIKOV, V.N., akademik; BOYARSKIY, V.A.; LIKHTENSHTEYN, Ye.S.; VYAZEMTSEVA, V.N., red.izd-va; KIXAYS, Ye.M., red.izd-va; TARASENKO, V.M., red.izd-va; POLYAKOVA, T.V., tekhn. red.

> [As seen by a scientis: From the Earth to galaxies, To the atomic nucleus, From the atom to the molecule, From the molecule to the organism] Glazami uchenogo: Ot Zemli do galaktik, K iadru atoma domolekuly, Ot molekuly do organizma. Moskva, Izd-vo AN SSSR, 1963. 736 p. 1. Akademiya nauk SSSR. 2. Chlen-korrespondent AN SSSR (for Asratyan, Ginetsinskiy, Kochetkov, Mel'nikov, Reutov, Ryzhkov, Frank, I.M., Frank, G.M.) (Astronomy) (Nuclear physics) (Chemistry) (Biology)

CIA-RDP86-00513R000413410013-4"

APPROVED FOR RELEASE: 08/23/2000



FCK, V. A.

The principle of relativity of Galileo, his generalization and its applications in the theory of gravitation of Einstein.

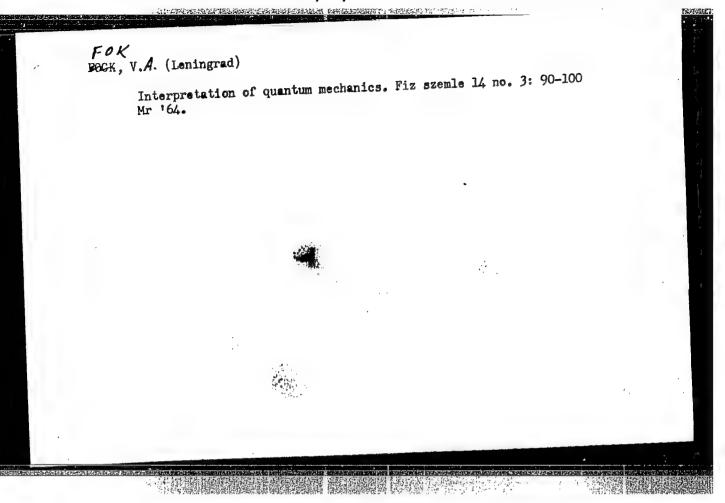
Report to be submitted at an International Meeting on "General Relativity: Problems of Energy and Gravitational Waves", Florence, Italy, 9-12 Sep 64.

FOCK, V. [Fok, V.]. (Leningrad)

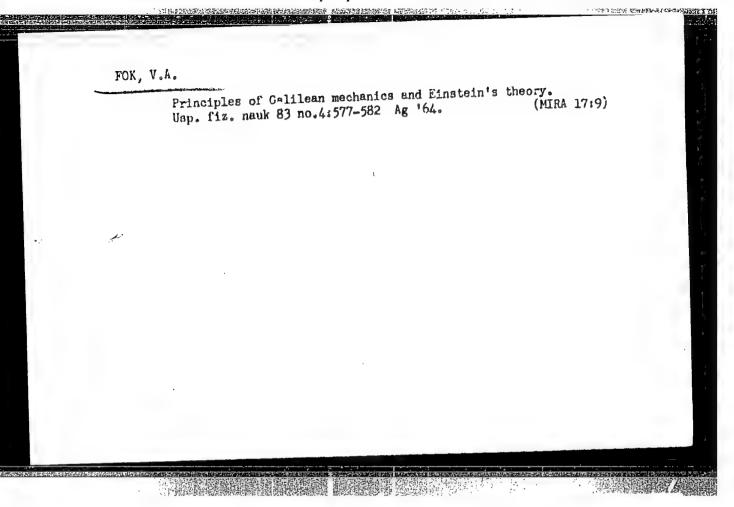
The principle of relativity and equivalence in the Einstein's theory of gravitation. Fix szemle 14 no. 1: 12-18 Ja '64.

### "APPROVED FOR RELEASE: 08/23/2000

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KEIER, V.R., otv. red.; MILLIONSHCHIKOV, M.D., akademik, red.;

BLOKHIN, N.N., red.; BLOKHINTSEV, D.I., red.; CHEDENKO,

B.V., akademik, red.; ZAYCHIKOV, V.N., red.; KELDYSH, M.V.,

akademik, red.; KIRILLIN, V.A., akademik, red.; KORTULOV,

V.V., red.; MONIN, Andrey Sergeyevich, prof., doktor fiz.—

v.V., red.; MONIN, Andrey Sergeyevich, prof., doktor fiz.—

matem. nauk, red. (1921); NESMEYANOV, A.N., akademik, red.;

PARIN, V.V., red.; REBINDER, P.A., akademik, red.; FRANTSOV,

N.N., akademik, red.; FOK, V.A., akademik, red.;

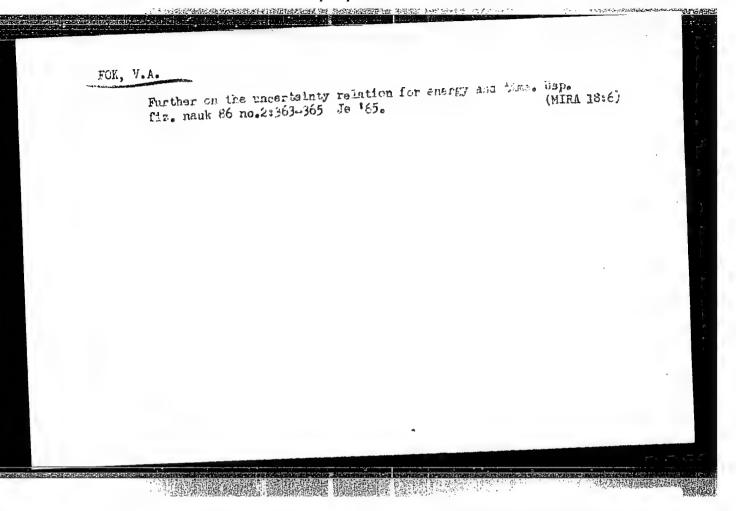
G.P., akademik, red.; ENGEL GARDT, V.A., akademik, red.;

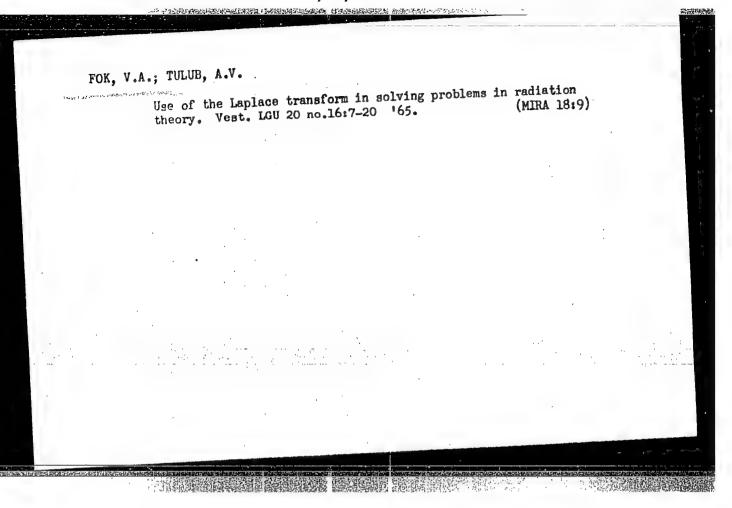
KREMNEVA, G., red.; BALASHOVA, A., red.; BERG,A.I., akademik, red.

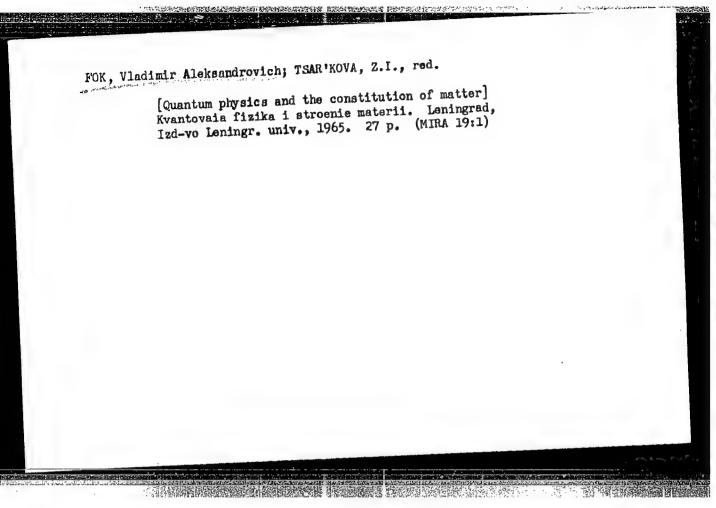
[Science and mankind, 1964; simple and precise information about the principal developments in world science] Nauka i chelovechestvo, 1964.; dostupno i tochno o glavnom v mirovoi nauke. Moskva, Izk-vo "Znanie," 1964. 424 p. (MIRA 18:1)

1. Deystvitel nyy chlen AMN SSSR (for Blokhin, Parin) 2. Chlen-korrespondent AN SSSR (for Blokhintsev). 3. Akademiya nauk SSSR Ukr.STR (for Gmedenko).

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000413410013-4"







25632-66 EWT(d)/EWT(1)/T IJP(c) C NR, AP6016071 SOURCE CODE: UR/0054/65/000/013/0007/002	20
THOR: Fok, V. A.; Tulub, A. V.	
G: none	
TLE: Application of Laplace transformation to problems in theory of radiation	-
URCE: Leningrad. Universitet. Vestnik. Seriya fiziki i khimii, no. 3, 1965,	
PIC TAGS: Laplace transform, quantum field theory, integral equation, differentiquation	al
STRACT: The system of atomic amplitude equations in the quantum field theory of adiation is transformed into a single integral-differential equation the solution which may be obtained by using the Laplace transformation. The method developed oplied to the calculation of the natural line width, resonance fluorescence, and cternal field problems. Orig. art. has: 4 formulas. [Based on authors' Eng. est.] [JPRS]	is
JB CODE: 20, 12 / SUBM DATE: 05Apr65 / ORIG REF: 003 / OTH REF: 005	
	2
ord 1/1 M UDC: 535.14	

RADOVSKIY, M.I.; FOK, V.A., akademik

Vladimir Ivanovich Smirnov; on his 75th birthday. Usp.mat.
nauk 17 no.6:185-190 M-D '62.
(MIRA 16:1)

(Smirnov, Vladimir Ivanomich, 1887-)

S/109/63/008/003/001/027 D413/D308

AUTHORS:

Fok, V. A., and Vaynshteyn, L. A.

TITLE:

Transversal diffusion in the diffraction of short waves on a convex cylinder with smoothly varying curvature. Part I

PERIODICAL:

Radiotekhnika i elektronika, v. 8, no. 3, 1963, 363-376

TEXT: L. A. Vaynshteyn and G. D. Malyuzhinets (Radiotekhnika i elektronika, v. 6, no. 8, 1961, 1247; v. 6, no. 9, 1961, 1489) have derived a general asymptotic solution of the two-dimensional diffraction problem for a circular cylinder of large radius; the authors consider how to extend this solution to any arbitrary convex cylinder whose radius of curvature is large compared with the wavelength and varies smoothly. They reject a solution postulated by analogy with the formula for the circular cylinder because it cannot be justified mathematically; by neglecting the

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S/109/63/008/003/001/027 D413/D308

Transversal dirfusion ...

longitudinal diffusion term, which can be shown to be small under the given conditions, they reduce the wave equation to an equation of parabolic type expressed in radial coordinates and consider substitutions which simplify its integration. In the particular case where the contour of the cylinder along the path of the diffraction wave is a segment of a spiral whose radius of the diffraction wave is a segment of a spiral whose radius of curvature is proportional to the cube of the arc length measured from the focus, an exact separation of the variables in the parabolic equation is possible; by applying a generalized locality principle for expressing the incident wave, it is possible to obtain a unique asymptotic expression for the two-dimensional obtain a unique asymptotic expression for the two-dimensional Green function which is valid in both umbra and penumbra at any distance from the surface of the cylinder. This result is in agreement with results obtained by W. Franz and K. Klante (IRE Trans., 1959, AP-7, Spec. Suppl., 68-70), and also J. B. Keller Trans., 1959, AP-7, Spec. Suppl., 52-61).

Some consequences for plane-wave diffraction are examined, and possibilities for generalizing the results are discussed. The

Card 2/3

Transversal diff	usi on	S/109/63/008/003/001/027 D413/D308		
		nets for his advice.	There are 5	
figures. ASSOCIATION:		zicheskikh problem Al Problems, AS USSR)		
SUBMITTED:	September 1		, person	
Oard 3/3		14.50		

\$/109/63/008/003/002/027 D413/D308

AUTHORS:

Fok, V. A., and Vaynshteyn, L. A.

TITLE: Hill Anni

Transversal diffusion in the diffraction of short waves on a convex cylinder with smoothly

varying curvature. Part II

PERIODICAL:

Radiotekhnika i elektronika, v. 8, no. 3, 1963,

377-388

TEXT: Starting from the parabolic equation obtained in Part I (Radiotekhnika i elektronika, v. 3, no. 3, 1963, 363), the authors derive an asymptotic solution to the two-dimensional problem of the diffraction of a cylindrical wave on an arbitrary convex cylinder for any positions of the source and point of observation in relation to the cylinder. The assumptions are that the radii of curvature are large compared with the wavelength, that the curvature varies relatively slowly, and that the cylinder either is ideally reflecting or has an impedance parameter related in a certain manner to the curvature. Two expres-

CIA-RDP86-00513R000413410013-4" APPROVED FOR RELEASE: 08/23/2000

Transversal diffusion in the ... D413/D308

S/109/63/008/003/002/027

sions are obtained whose zones of validity overlap and which, between them, cover the whole of the umbra and penumbra regions; they are quite different from the solution that could be postulated by analogy with the case of the circular cylinder (see Part I) and are shown to be much more accurate. There are 2 figures.

ASSOCIATION:

Institut fizicheskikh problem AN SSSR (Institute

of Physical Problems, AS USSR)

SUBMITTED:

September 11, 1962

AMBARTSUMYAN, V.A., akademk; GINZBURG, V.L.; ZEL'DOVICH, Ya.B., akademik; PONTEKORVO, B.M.; SMORODINSKIY, Ya.A., avtor nauk, prof.; FOK, V.A., akademik, CHERNOV, A.G.; FAYNBOYM, I.B., red.

[Birth and evolution of the galaxies and stars; the third discussion] Rozhdenie i evoliutsiia galaktik i zvezd; beseda tret'ia. [By] V.A.Ambartsumian i dr. Moskva, Izd-vo seda tret'ia. [By] V.A.Ambartsumian i dr. Moskva, tekhnike. "Znanie," 1964. 27 p. (Novoe v zhizni, nauke, tekhnike. Seriia IX: Fizika, matematika, astronomiia, no.12)

1. Chlen-korrespondent AN SSSR (for Ginzburg, Pontekorvo).

**"工工"。"小学大学工作的一种企业工作,不是一个工作。"** 

BURKSER, Ye.S. [Burkser, IE.S.]; BRADIS, L.M. [Bradis, IE.K.]; EULISKATA,

O.A. [Kul's'ka, O.A.]; FOKA, G.M. [Foka, H.M.]

Trace elements in the peats of the Ukraine, Dop. AR UKB no.3:1222.

1226 '62.

Institut geologicheskikh nauk AN Ukrsem, 2. Chlen Vertespendent

AN Ukrsem (for Burkser).

FOKA, M.N.

USSR/Chemistry - Physical chemistry

Card 1/1

Pub. 22 - 33/63

Authors

Foka, M. N., and Burkser, L. E.

Title

Mobility of S in thio-acids. Exchange reactions between elementary S and potassium ethylkathogenate

Periodical : Dok. AN SSSR 99/6, 1011-1014, Dec 21, 1954

Abstruct

A study of the interchange reaction between thicacetic acid and elementary S revealed a comparatively low mobility of S in this compound. Reverse addition of the elementary S to the double bond of C - S acid, was found to be the mechanism of this interchange reaction. It was established that the S molecules are sufficiently mobile and contain easily polarizable electrons which bird the S atoms in these electrons. An increase in the polarity of the C = S band in the potassium ethylxanthogenate leads to an acceleration of the interchange reaction with the elementary sulfur. The rate of reaction is determined by the rate of decomposition of the intermedia polysulfide product. Nime references: 4-USA and 5-USSR (1939-1953). Tables.

institution: Presented by:

The Hedical Stomatological Institute, Kiev Academician A. N. Frunkin, June 24, 1954

- 1. FOKA, P. D.
- 2. USSR (600)
- 4. Moldavia Alfalfa
- 7. Alfalfa seed culture on Moldavian state farms. Dost. sel'khoz. no. 6, 1952.

9. Monthly List of Russian Accessions, Library of Congress, January, 1953, Unclassified.

FUNH, J. D.

MSSR/Seil Science - Cultivation, Ameldoration, Erosion.

J-4

Abs Jour

: Ref Zhur - Biol., No 2, 1958, 5809

Author

: Foka, P.

Inst Title

Harrowing Autumn Fallow

Orig Pub

Zemledeliye i zhivotnovodstvo Moldavii, 1956, No 10, 16-17

Abstract

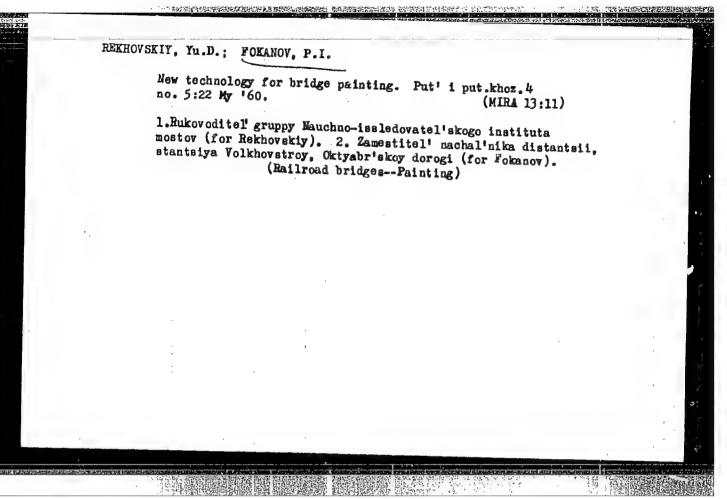
: The advisability, under Moldavian conditions, of harrowing early autumn fallow for grain crops is shown. The autumn plowing practiced here, which leaves the soil in ridges grebnistaya worsens the physical properties of the soil.

Card 1/1

FORANOV, I.G.

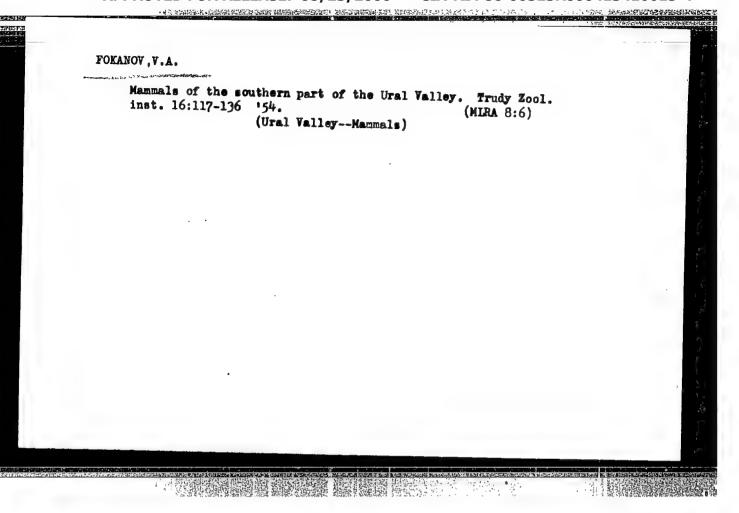
Economic efficiency of open are welding at a shipyard. Avtom.
svar. 18 no.4170-72 Ap 165.

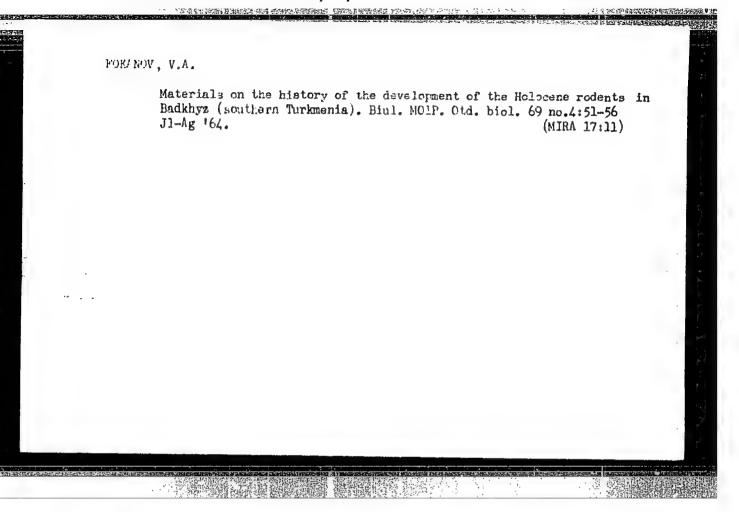
1. Institut elektrosvarki imeni Ye.O. Patona AN UkrSSR.



- 1. FOKANOV, V. A.
- 2. USSR (600)
- 4. Mammals West Kazakhstan Province
- 7. Survey of the mammal fauna of the Ural foothill region of the West Karakhatan Province. Trudy Zool inst. No. 11 1952

9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.





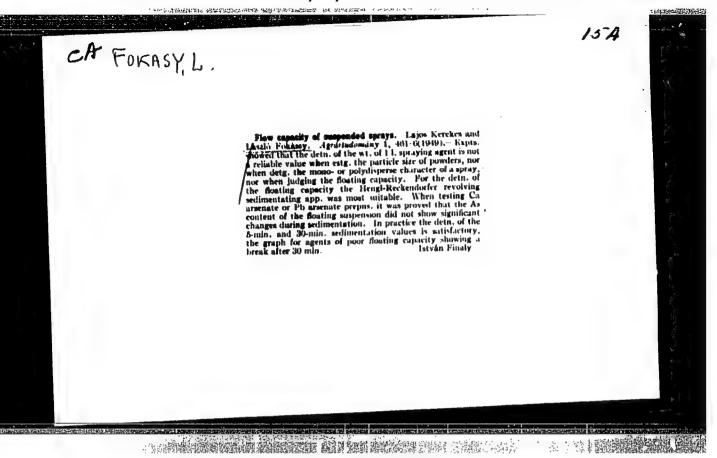
SARKANY, Tamas; MARGITTAI, Pal; MELEG, Jozsef; FOKAS, Elemer

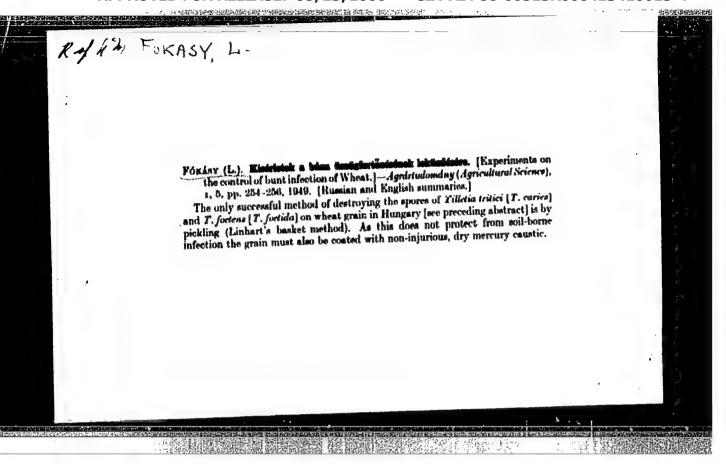
・ 対対の表示的語彙を提供に対象を確認を認識を認識を対象を認識を表示している。

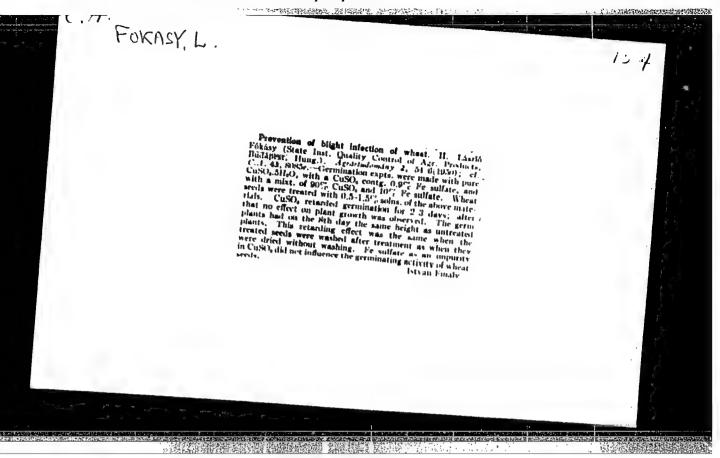
Linear problems of microwave connections: also, remarks by P. Margittai, J. Meleg, and E. Fokas. Muszaki kozl MTA 26 no.1/4:35-53 '60.

(EEAI 9:10)

1. Tavkozlesi Kutato Intezet (for Sarkany)
(Radio) (Microwaves)







FORMSY, LASZLO

Hungary / Chemical Technology. Chemical Products

I-10

and Their Application

Pesticides

Abs Jour: Referat Zhur - Khimiya, No 9, 1957, 31315

Author Fokasy Laszlo

Title Determination of Volumetric Weight of Pulverulent

Pesticidal Preparations

Orszagos mezogazd. monosegvizsg. int. evk., 1952-1953 (1954), 2, 269-273 Orig Pub:

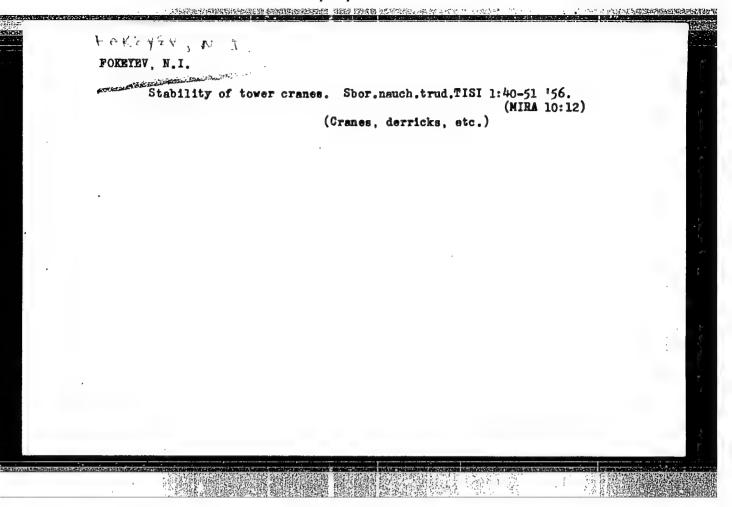
Abstract: No abstract.

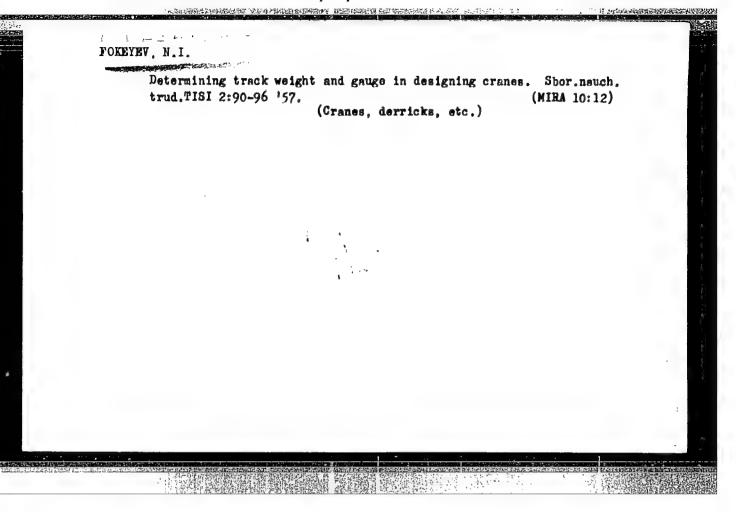
Card 1/1

LAVRINOVICH, M.I.; FOKEYEV, G.S.

Redesign of automatic SHA-1 sluice gates. Obog. rud 4 no.6: 38-40 159. (MIRA 14:8)

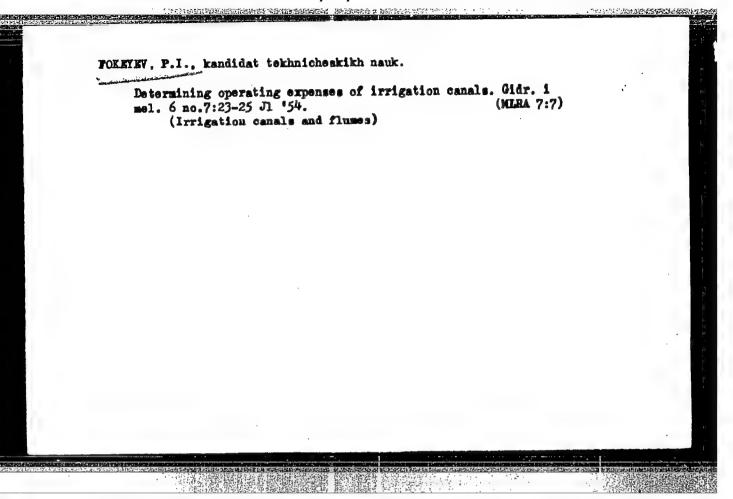
(Ore dressing-Equipment and supplies)





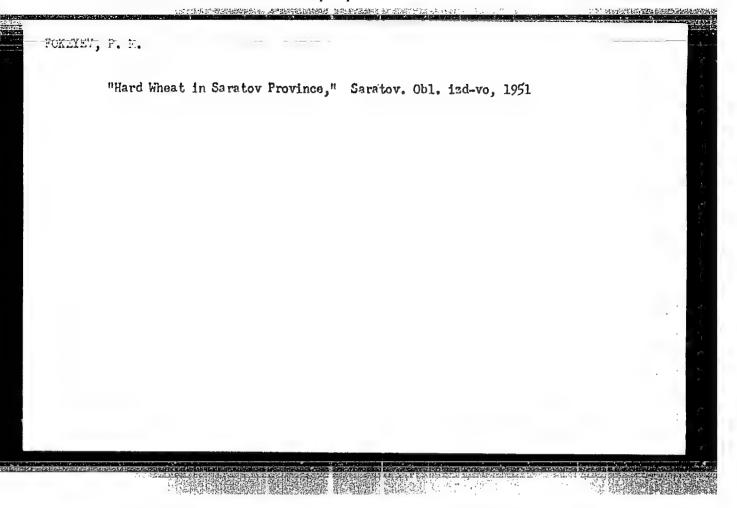
CHUMACHENKO, I.N.; RAKHMATDZHANOV, U.; SUSHENITSA, B.A.; KUZNETSOVA,
N.Ye.; PONOMAREV, V.G.; FOKEYEV, N.I.; ERGASHEV, R.;
PROTIKOVSKAYA, S., red.

[Recent developments in the use of mineral fertilizers)
Novoe v primenenii mineral nykh udobrenii. Dushanbe, Izd.,
vo "Irfon," 1964. 61 p. (MIRA 18:4)



FOMEYEV, P. M.

"How to Obtain a High Yield of Spring Wheat," Saratov. Obl. 1zd-vo, 1918



- 1. FCKEYEV, P, M.
- 2. USSR (600)
- 4. Grain
- 7. Cereal crops under irrigation. Dost, sel'khoz. no.10, 52

9. Monthly List of Russian Accessions, Library of Congress, February 1953. Unclassified.

FCKEYNV, F.

Wheat - Volga Valley

Cultivation of hard wheat in the Volga Valley.

Kolkh. proizv. 12, no. 3, 1952

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- 1. FOKEYEY, P.M.
- 2. USSR (600)
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72 FORETEN, PM.

USSR/Cultivated Plants - Grains.

L-2

Abs Jour

: Ref Zhur - Biologiya, No 16, 25 Aug 1957, 69199

CHARLE STORY AND RESERVED AND THE SERVED TO A LEGISLATION OF THE SERVED THE S

Author

Fokeev, P.M.

Inst Title

Increasing Production of Hard Wheat.

Orig Pub

: S. kh. Povolzhya, 1956, No 1, 25-32

Abstract

: According to data of experimental stations and the Southeast Institute of Agriculture, hard wheats yield a similar crop on layered and on soft grounds. The data given for comparative yields of hard and soft wheats under Southeast arid conditions show that no substantial difference exists in yields of soft or

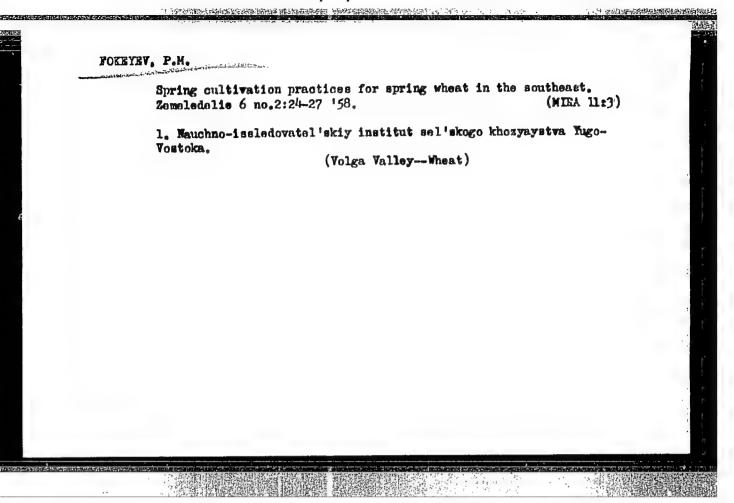
hard wheats under the same conditions.

Card 1/1

FOKEYEV, P. M. Doc Agr Sci -- (diss) "Agronomic Foundations of the Cultivation of Spring Wheat in the Southeast." Mos, 1957.

31 pp 20 cm. (Mos Order of Lenin Agricultural Academy im K. A. Timiryazev), 110 copies (KL, 25-57, 115)

- 90 - 89. -



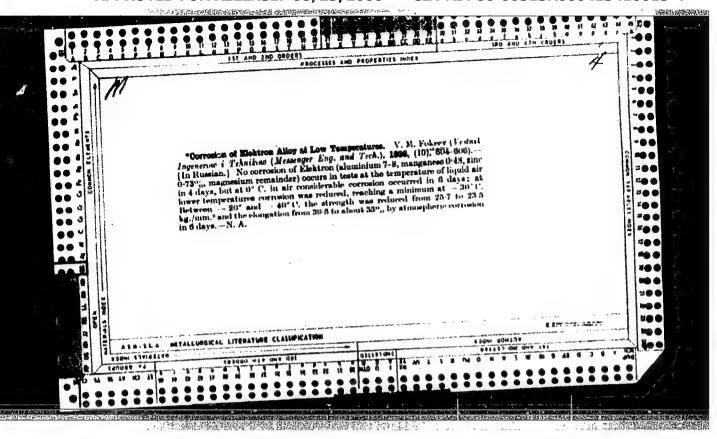
Snow retention as an important factor in increasing crop yields in arid regions. Zemledelie 8 no. 12:20-25 D '60. (MEA 13:11)

1. Mauchno-issledovatel'skiy institut sel'skogo khosyaystva Yugo-Vostoka. (Snow) (Field crops)

POLYKOVSKIY, V.S.; ROYZENMAN, F.M.; MAKSAREVA, T.S.; FOKEYEV, V.M.

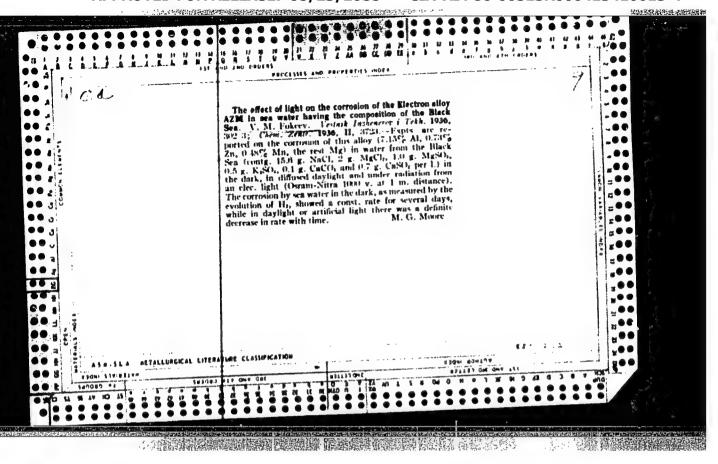
Methodology of determining pressure by inclusions in quartz.

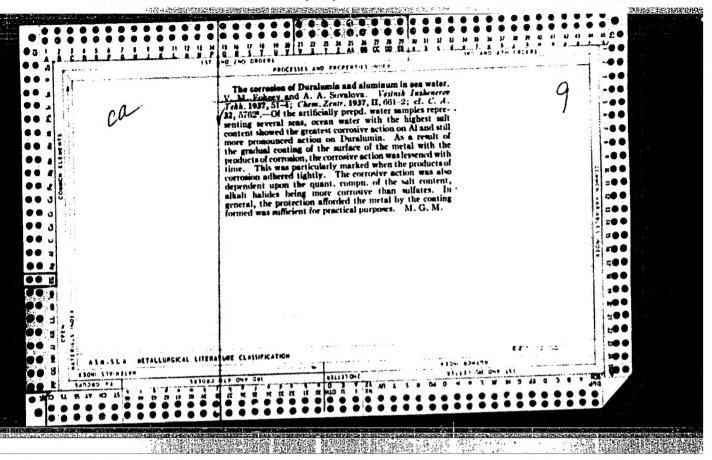
Trudy MGRI 39:92-100 '63. (MIRA 16:10)



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#### CIA-RDP86-00513R000413410013-4





PRINCE CONTROL OF THE PRINCE O

FOKEYEV. V., M.,

Pa. 150T17

USSR/Engineering - Awards
Literature

Sep 49

"Award of Prizes by the Presidium of the Academy of Sciences USSR to Scientific Workers of Institutions of the Department of Technical Sciences" } p

"Iz Ak Nauk SSSR, Otdel Tekh Nauk" No 9

Prizes of 7,500 rubles each were awarded at the 1h Jul h9 meeting to: A. A. Il'yushin, Corr Mem, Acad Sci USSR, Inst of Mech, for work on supersonic flow of gas; Yu. N. Rabotnov, Dr Physicomath Sci, Inst of Mech, for his work, "Slow Flow in Solid Substances"; V. M. Fokeyev, Dr Chem Sci, Inst of Petroleum, for his work, "Viscosity of Stratified Petroleums"; and N. N. Tykalin, Dr Tech Sci, Sec for Sci Development of Problems of Elec Welding and Electrothermics, for his work, "Thermal Principles of Welding, Part I,"

Pa. 150T17

